



**DEPARTMENT OF THE NAVY**  
NAVAL SEA SYSTEMS COMMAND DETACHMENT  
RADIOLOGICAL AFFAIRS SUPPORT OFFICE (RASO)  
NWS P.O. DRAWER 260  
YORKTOWN, VA 23691-0260

IN REPLY REFER TO:

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**02 FEB 1995**

From: Officer in Charge, Naval Sea Systems Command Detachment,  
Radiological Affairs Support Office (RASO)  
To: Commander, Western Activity, Naval Facilities Engineering  
Command (ATTN: Michael McClelland)  
Subj: REQUEST FOR INFORMATION REGARDING FORMER NAVAL  
RADIOLOGICAL DEFENSE LABORATORY (NRDL) AND FORMERLY USED  
DEFENSE (FUD) SITES AT HUNTERS POINT ANNEX (HPA),  
SAN FRANCISCO, CALIFORNIA  
Ref: (a) PRC Environmental Management Inc. ltr of 28 Oct 94  
Encl: (1) Summary of Sites and Buildings  
(2) Waste Tanks  
(3) NNPU ltr 3256 Ser 1235 of 12 Oct 79  
(4) NAVSHIPYD San Francisco Bay, code 034 memo of  
6 Dec 74  
(5) NAVSHIPYD San Francisco Bay ltr 5100 of Jan 70  
(6) Radiological History of the Naval Radiological Defense  
Laboratory  
(7) SUPSHIP San Francisco ltr 165-52 of 19 Aug 79

1. As requested in reference (a), NAVSEADET RASO has conducted an extensive records search on the use and disposal of radioactive materials at the former NRDL and FUD Sites at Hunters Point Annex, San Francisco, CA. The results of this review are forwarded in enclosures (1) through (7) as follows:

a. Enclosure (1) is a summary of sites and buildings with recommendations on surveys and sampling requirements. NRDL Annual Reports are referenced as (AR-YR) in this summary.

b. Enclosure (2) is a list of the radioactive waste holding tanks, their locations and recommendations regarding sampling.

c. Enclosures (3) through (7) are the available historical reports on decontamination and decommissioning of the subject areas.

2. NAVSEADET RASO point of contact is Lieutenant Commander L. L. Fragoso or Mr. R. W. Lowman, DSN 953-4692, commercial 804-887-4692.

  
D. E. FARRAND

## SUMMARY OF SITES AND BUILDINGS

Site/ Bldg	Comments
<b>NRDL</b>	Radionuclides were used in Buildings 364, 506, 507, 529, 510, 529, 815, 816 and 830/831.
313	Little or no decontamination efforts required during move to building 815 (AR-55). <b>Surveys are not required.</b>
351	Little or no decontamination efforts required during move to building 815 (AR-55). <b>Surveys are not required.</b>
351B	X-ray unit and radiation sources (UDM-1, <sup>60</sup> Co sealed source). Little or no decontamination efforts required during move to building 815 (AR-55, AR-54). <b>Surveys are not required.</b>
364	Hot Cell. Surveyed by RASO in 1978, areas of contamination found outside the building. <b>Survey required for area surrounding building.</b>
506	Chemistry lab. Very extensive efforts to decontaminate building during move to building 815 (AR-55). Decontaminated after processing of HARDTACK samples (AR-58, pg6). Building destroyed. <b>Soil sampling required for area surrounding building.</b>
507	Biological Lab. Extensive efforts to decontaminate building during move to building 815 (AR-55). Building destroyed. <b>Soil sampling required for area surrounding building.</b>
508	Health Physics Office. Little or no decontamination efforts required during move to building 815 (AR-55). Building destroyed. <b>Soil sampling required for area surrounding building.</b>
509	Animal Irradiation Studies. Building destroyed. <b>Soil sampling required for area surrounding building.</b>
510 & 510A	Radiation Physics. 1MeV x-ray unit (AR-58). Building destroyed. <b>Soil sampling required for area surrounding building.</b>
517	Building used by the Bio-Med division prior to 1954 (AR-54). <b>Soil sampling required for area surrounding building.</b>

Site/ Bldg	Comments
529	C-W generator. Radioactive materials were stored in this building until needed by the investigators (AR-54, AR-55). Building destroyed. <b>Soil sampling for area surrounding building.</b>
707	A contamination incident in 1962 due to a leaking drum was decontaminated to bkgd levels (AR-62). <b>Soil sampling for area surrounding building.</b>
815	Main lab. Decontaminated to NRC standards. <b>Surveys are not required.</b>
816	Van de Graaff. Tritium safe for storage (AR-54). Surveyed by in 1993. <b>Surveys are not required.</b>
820	Cyclotron did not achieve full power. <b>Surveys are not required.</b>
830/831	Animal facility, trace amounts of radionuclides. Radioactive carcasses were put in plastic bags with formaldehyde and placed in 20 gallon cans for disposal in accordance with AEC regulations. <b>Surveys are not required.</b>
<b>SFNS</b>	Only sealed sources were used by SFNS. Radiochemical analyses were performed at Mare Island Naval Shipyard
113A	Radiographers Vault & Waste Disposal/Storage. Surveyed by shipyard prior to decommissioning. <b>Surveys are not required.</b>
146	Radioactive Waste Disposal/Drum Storage. Surveyed by shipyard prior to decommissioning. <b>Surveys are not required.</b>
214	Health Physics Counting Room (105). Surveyed by shipyard prior to decommissioning. <b>Surveys are not required.</b>
253	Calibration Room. Surveyed by shipyard prior to decommissioning. <b>Surveys are not required.</b>

Site/ Bldg	Comments
351A	Radiac Repair Facility. (AR-54). Two incidents of contamination. Decontamination of the bldg was performed to 200 cpm removable activity. Extensive efforts to decontaminate during move to building 815 (AR-55). Beta contamination discovered by USNRDL in various portions of the drain pipe, no record of decontamination (AR-55, pg13). The rest of the area was surveyed by the shipyard prior to decommissioning. <b>Sampling of the drain pipe is required</b>
113A	Storage of sheet lead removed from building 364. cursory survey indicated no contamination. <b>Surveys are not required.</b>
114	<b>No evidence of radioactive materials use or radiological work. Surveys are not required.</b>
274	<b>No evidence of radioactive materials use or radiological work. Surveys are not required.</b>
313A	<b>No evidence of radioactive materials use or radiological work. Surveys are not required.</b>
365	Cursory survey indicated no contamination. <b>No evidence of radioactive materials use or radiological work. Surveys are not required.</b>
708	<b>No evidence of radioactive materials use or radiological work. Surveys are not required.</b>
Berth 2	29 drums of radioactive waste inadvertently fell overboard and were immediately recovered in 1954 (AR-54). Contents of the drums is not identified, however there is no mention of ruptured drums or spread of contaminants. Surveyed by EPA in 1989. <b>Surveys are not required.</b>

## WASTE TANKS

Waste Tanks Locations	Comments
364	Two holding tanks were removed at the time of decommissioning USNRDL and disposed of as radioactive waste. The plumbing from building 364 to the tanks was removed and disposed of as radioactive waste. The tank pit, sump pit were decontaminated to respective levels of 0.1 mr/hr and 1 mr/hr. The pump shed and associated plumbing was decontaminated to 0.07 mr/hr on the floor and 0.2 mr/hr in the sump. <b>Surveys and sampling are required in the sump pit.</b>
506 & 529	Stainless steel tank removed in 1969 after decontamination to 100 dpm and 570 dpm in the bottom of the sump. This tank was later used by the shipyard for boiler feed water storage. <b>Surveys are not required.</b>
815	Radioactive waste from USNRDL was disposed of in waste containers and removed by a licensed contractor. Liquid radioactive waste containing alpha emitters or containing organic solvents were not allowed to be disposed of in the sinks. All laboratory sinks and drains emptied into two radioactive waste holding tanks for controlling and monitoring the release of radioactivity into the city sewage in accordance with AEC regulations. The tanks were sampled at the time of decommissioning NRDL and found to have $0.95 \times 10^{-7}$ $\mu$ Ci of beta/gamma activity and $4.4 \times 10^{-9}$ $\mu$ Ci of alpha activity. These levels were acceptable to the AEC. <b>Surveys are not required.</b>